

REMARKS

The Office Action dated October 1, 2008 has been received and carefully noted. The above amendments to the abstract and claims, and the following remarks, are submitted as a full and complete response thereto.

Claim 1 has been amended to more particularly point out and distinctly claim the subject matter of the invention. No claims have been cancelled and no claims have been added. No new matter is believed to have been added. Claims 1-7 are currently pending and are respectfully submitted for consideration.

Reconsideration and withdrawal of the objections and rejections is respectfully requested in light of the following remarks.

The Office Action objected to the abstract, because the abstract was allegedly not a single paragraph. However, Applicants have amended the abstract to further satisfy the requirements set forth under MPEP § 608.01(b). Accordingly, withdrawal of the objection is respectfully requested.

Claims 1-7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Takenaka, *et al.* (U.S. Patent Publication No. 2006/0106495) (“Takenaka”). The Office Action asserted that Takenaka discloses all of the elements recited in claims 1-7. However, this rejection made by the Office Action is respectfully traversed as follows.

Applicants respectfully submit that U.S. Patent Publication No. 2006/0106495 related to Takenaka et al. does not qualify as prior art under 35 U.S.C. § 102 (a), (b), or

(e) for at least the following reasons. Applicants respectfully submit that the publication date of Takenaka is May 18, 2006, which is after the filing date (e.g. March 24, 2006) of the above-identified application. Although the PCT application of Takenaka was filed on April 28, 2003, the PCT application of Takenaka is not afforded a § 102(a), (b), or (e) date, since the WIPO publication of the PCT application of Takenaka was not published in English nor was it filed in English. Instead, the PCT application of Takenaka was published and filed in Japanese (see attached WIPO document). As such, under MPEP § 706.02(f)(1), Takenaka is not awarded a § 102(e) date.

In sum, because the PCT application of Takenaka cannot be awarded a § 102(e) date, the Takenaka cannot claim priority to the filing date of the PCT application of Takenaka. Accordingly, Takenaka does not qualify as prior art under § 102 (a), (b), or (e).

In addition, in an attempt to further prosecution, Applicants respectfully submit that Takenaka does not disclose all of the elements recited in claims 1-7, for at least the following reasons.

Claim 1, upon which claims 2-7 are dependent, recites a leg type mobile robot. The leg type mobile includes a body. The leg type mobile includes legs each connected to the body via a first joint. The leg type mobile includes feet, each connected to an end part of the leg via a second joint. Each foot includes at least one foot portion, which has a ground area to be grounded on a floor surface at the bottom thereof, and a floor reaction

force detector for detecting floor reaction force acting from a floor surface through the foot portion. A center (Pc) of the second joint is offset against a position Pa in a plane view, the position Pa is the position where the distance to the remotest point of at least one ground area becomes minimum, and a center (Pb) of the floor reaction force detector is provided so that the center Pb is in the vicinity of the position Pa than the center Pc of the ankle joint in a plane view.

By at least the aforementioned features of claim 1, because the position Pa is the position where the distance to the remotest point of at least one ground area becomes minimum, a center (Pb) of the floor reaction force detector is provided in the vicinity of the position Pa. As a result, the leg type mobile robot of the instant application is more suitable for high speed travel.

However, as will be discussed below, Applicants respectfully submit that Takenaka fails to disclose, either expressly or inherently, all of the elements of claims 1-7, and therefore fails to provide the advantages and features discussed above.

Takenaka generally discusses a control device of a legged mobile robot. More particularly, Takenaka provides a control device of a legged mobile robot that makes it possible to bring a trajectory of a leg distal portion (foot) of a robot relative to a floor [and] close to the trajectory of a leg distal portion (foot) of a desired gait to ensure [that] the robot leave[s] [the] floor ... according to the desired gait so as to prevent the robot from slipping or spinning (see Takenaka, paragraph [0013]).

However, claim 1 recites, in part, that “... a center (Pb) of the floor reaction force detector is provided...in the vicinity of the position Pa ...” (claim 1, lines 13-15), since “the position Pa is the position where the distance to the remotest point of at least one ground area becomes minimum” (claim 1, lines 11-12). As a result, the leg type mobile robot of the instant application is more suitable for high speed travel.

Takenaka cannot disclose, either expressly or inherently, at least the features recited above, since Takenaka is merely concerned with preventing a robot from slipping, spinning or a leg of the robot being caught on the floor. More particularly, Figure 1 of Takenaka illustrates a publicly known six-axis force sensor 50 provided between the ankle joints 18R(L), 20R(L), and the foot 22R(L) of each leg 2 (see Takenaka, paragraph [0086]).

However, paragraph [0086] is silent as to how “a center (Pb) of the floor reaction force detector is provided”, as recited in claim 1. Moreover, paragraph [0086] of Takenaka is silent as to “provid[ing] ... the center Pb [of the floor reaction force detector] ... in the vicinity of the position Pa ...”, as recited in claim 1. This silence is not surprising, since Figures 1 and 2, and paragraph [0086] of Takenaka merely describe an outline of a bipedal mobile robot designed to prevent the robot from slipping. In other words, Applicants respectfully submit that Figure 2, for example, illustrates a basic configuration of the foot 22R (L) that includes a compliance mechanism (see Takenaka,

paragraphs [0088]-[0089]) rather than “[providing] the center Pb...in the vicinity of the position Pa”, as recited in claim 1.

Moreover, Applicants respectfully submit that Figures 3 and 4 illustrate the details of the compliance mechanism, and, more particularly, illustrate the mechanism of the landing shock absorber 108 including a bag-shaped member 109 (see Takenaka, paragraph [0090]-[0098]). In addition, Applicants respectfully submit that Figure 4 merely illustrates how the ground contact member 71 consisting of soft layers 107a and the hard layers 107b, the guide member 103, and the bag-shaped member 109 of the landing shock absorber 108 are arranged on the bottom surface of the foot 22 R(L).

As such, nothing in Figures 1-4 of Takenaka remotely suggest how “[a] center (Pb) of the floor reaction force detector is provided...in the vicinity of the position Pa than the center Pc of the ankle joint in a plane view”, as recited in claim 1.

In addition, Figures 18(a) and 18(b) of Takenaka, which was relied upon by the Office Action, fails to disclose the features of claim 1, as quoted above, because Figures 18(a) and 18(b) of Takenaka merely illustrate a graph explaining the process of determining a corrected gait instantaneous value shown in Figure 17 (see Takenaka, paragraphs [0076] and [0199]). More particularly, Figures 18(a) and 18(b) of Takenaka fail to disclose, either expressly or inherently, “[that] a center (Pb) of the floor reaction force detector is provided so that the center Pb is in the vicinity of the position than the center Pc of the ankle joint in a plane view” as recited in claim 1. Rather, Figure 18(a) of

Takenaka illustrates how to determine a correction amount curve (referred to as a first correction amount curve) (see Takenaka, paragraph [0205]). Figure 18(b) of Takenaka illustrates how to determine a second correction amount curve as a new correction amount curve (see Takenaka, paragraph [0206]). Therefore, Figures 18(a) and 18(b) of Takenaka illustrate the process of the subroutines for determining a corrected gait instantaneous value (see Takenaka, paragraph [0210]), rather than illustrating how “a center (Pb) of the floor reaction force detector is provided ... in the vicinity of the position than the center Pc of the ankle joint in a plane view” as recited in claim 1.

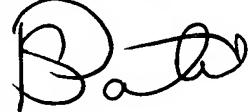
Accordingly, the rejection of independent claim 1 should be withdrawn as Takenaka fails to disclose, either expressly or inherently, the features of claim 1, as discussed above. Furthermore, the rejection of claim 2-7, which are dependent upon claim 1, should also be withdrawn for at least the same reasons as discussed above with respect to claim 1.

For at least the reasons discussed above, Applicants respectfully submit that none of the cited references, whether considered alone or in combination, disclose, either expressly, implicitly or inherently, all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-7 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Sheetal S. Patel
Attorney for Applicants
Registration No. 59,326

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY L.L.P.
14th Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

SSP:dk